

NRC Naracoorte Range Land System

Area: 314.1 km²

Annual rainfall: 550 - 665 mm average

Geology: The land system is formed on ancient coastal dune sand which has become indurated at the surface to form calcarenite. It is part of the Bridgewater Formation. The system is a single range, probably derived from the coalescence of several closely spaced dunes. Closed depressions within the range may be remnants of the original lagoons, or large solution features. They contain clayey sediments. There are intermittent sand spreads derived from reworking of the silica component of the original dune sands.

Topography: The Naracoorte Range Land system is the southern extension of the West Naracoorte Range Land System. It is a massive coalesced ancient coastal dune system up to 7 km wide and up to 110 m high. It includes numerous closed depressions, the floors of which are up to 40 m below the surrounding ranges. These are generally less than two to three km² in area, with the notable exception of Struan Land System which is mapped as a separate land system.

Elevation: 50 – 160 m

Relief: Overall maximum relief 110 m. Local relief 20 – 80 m

Soils:

Sandy soils (dunes, rises and flats)

H3 Bleached siliceous sand

G2 Sand grading to sandy clay loam

G3 Thick sand over clay

G4 Sand over poorly structured clay

Stony soils (rises and flats)

B2 Shallow calcareous loam on calcrete

B3 Shallow sandy loam on calcrete

B4 Shallow red loam on calcrete

B6 Shallow loam over red-brown clay on calcrete

B7 Shallow sand over clay on calcrete

L1 Shallow soil on rock

RR Limestone outcrop

Heavy soils (flats, rises and swamps)

F1 Loam over brown or dark clay

D2 Loam over red clay

N3 Wet soil (non to moderately saline)

Main features: The Naracoorte Range comprises two distinct components: The calcarenite ridges have well drained soils which are commonly shallow and stony with moderately low fertility. Associated sand spreads have very low fertility. The depressions between the ranges include soils such as shallow sandy soils over calcrete and sand over clay soils with impeded drainage. Overall, soils of the corridors are deeper and more fertile, but less well drained than those of the ridges.



Soil Landscape Unit summary: 33 Soil Landscape Units (SLUs) mapped in the Naracoorte Range Land System:

SLU	% of area	Main features #
M-B M-C	1.07 0.09	<p>NNW-SSE parallel ridges found on the western boundary of the Land System formed on calcreted calcarenites of ancient coastal dunes. Greater than 50% calcrete outcropping on these rises with associated shallow soils over limestone, 30-50% loamy soils and 10-20% deep sands.</p> <p>M-B Gently sloping undulating rises M-C Undulating rises to low hills</p> <p>Main soils: Outcrop: <u>Limestone outcrop</u> - RR, <u>shallow calcareous loam on calcrete</u> - B2, <u>shallow loam over red clay on calcrete</u> - B6 and <u>shallow sandy loam on calcrete</u> - B3. These soils are very shallow and stony, have moderately low fertility and very low water holding capacity. Soils are well drained. Rockiness is a limitation, variable to 50% in concentrated areas. Loamy rises: <u>Shallow red loam on limestone</u> - B4, <u>loam over red clay</u> - D2, B6 and <u>shallow sand over clay on calcrete</u> - B7. These soils are moderately deep, have high fertility and water holding capacity. Drainage is rapid. These soils have high productive potential. Sandy rises: <u>Bleached siliceous sand</u> - H3, <u>thick sand over clay</u> - G3 and <u>sand over clay</u> - G4. These soils are deep, have moderately low to low fertility and moderate waterholding capacity. Drainage is rapid. Severe water repellence, soil acidity and the susceptibility to wind and water erosion are limitations.</p>
MCA	0.34	<p>Small gently undulating moderate loamy sandy plain formed on calcreted calcarenites of ancient coastal dunes with 10-20% shallow stony soils and 10-20% sandy soils (sand over clay and minor deep sand).</p> <p>Main soils: Loamy plains and rises: <u>shallow loam over red clay on calcrete</u> - B6, <u>shallow sand over clay on calcrete</u> - B7, <u>shallow red loam on limestone</u> - B4 and <u>loam over red clay</u> - D2. These soils are moderately deep, have high fertility and high water holding capacity. There may be a slight water repellence limitation. These soils are highly productive. Shallow stony soils: <u>shallow calcareous loam on calcrete</u> - B2, <u>shallow red loam on limestone</u> - B4 and <u>shallow loam over red clay on calcrete</u> - B6. These soils are very shallow and stony, have moderately low to moderate fertility and low water holding capacity. Soils are well drained. Rockiness is a moderate limitation and the soils are calcareous throughout. Sandy rises: Soils are similar to M-B landscape unit and are deep, have moderately low fertility, moderate waterholding capacity and are well drained. Water repellence and the susceptibility to wind erosion are limitations.</p>
MDA MDB	3.88 1.67	<p>Part of the parallel ridge system to the west of the Land System formed on calcreted calcarenites of ancient coastal dunes.</p> <p>MDA Gently undulating loamy plain with low core topography, 10-20% outcrop and 0-10% swamps MDB Gently undulating loamy rises with 20-30% sandy rises and 10-20% outcrops</p> <p>Main soils: Loamy plains and rises: <u>loam over red clay</u> - D2, <u>loam over brown or dark clay</u> - F1, <u>shallow red loam on limestone</u> - B4, <u>shallow loam over red clay on calcrete</u> - B6, <u>friable gradational clay loam</u> - M2 and <u>shallow calcareous loam on calcrete</u> - B2. The loamy soils are moderate in depth, have high fertility and high to low water holding capacity. The soils are well to slightly imperfectly drained. These soils have high productive potential. Outcrops: The outcrop soils include those mentioned in M-B. These soils are very shallow and stony, have moderately low fertility and very low waterholding capacity. Soils are well drained. Rockiness is a limitation, variable to 50% in concentrated areas. Sandy plains and rises: The sandy soils are <u>bleached siliceous sand</u> - H3, <u>thick sand over clay</u> - G3 and <u>shallow sand over clay on calcrete</u> - B7.</p>



		<p>The sandy soils are deep, have moderately low fertility, moderate water holding capacity and rapid drainage. Water repellence and susceptibility to wind erosion are limitations.</p> <p>Swamps: Minor swampy soils are M2, <u>wet soil</u> - N3 and <u>shallow dark clay loam on limestone</u> - B5. These soils are deep, have high fertility and moderate waterholding capacity. Drainage is poor.</p>
MEB	0.39	<p>Undulating shallow rises with 30-50% sandy rises and 0-10% flats formed on calcreted calcarenites of ancient coastal dunes.</p> <p>Main soils:</p> <p>Shallow rises: <u>Shallow sandy loam on calcrete</u> - B3, <u>shallow calcareous loam on calcrete</u> - B2 and <u>shallow loam over red-brown clay on calcrete</u> - B6.</p> <p>These soils are shallow, have moderate fertility and low water holding capacity. Drainage is rapid. Rockiness, the susceptibility to wind and water erosion are limitations.</p> <p>Sandy rises: The sandy soils are <u>bleached siliceous sand</u> - H3, <u>bleached sand over sandy clay loam</u> - G2 and <u>thick sand over clay</u> - G3.</p> <p>These soils are deep with low fertility, moderate water holding capacity and rapid drainage. Severe water repellence and the susceptibility to wind and water erosion are limitations.</p> <p>Flats: <u>Thick sand over clay</u> - G3, <u>gradational dark clay loam</u> - C5 and <u>shallow dark clay loam over calcrete</u> - B5.</p> <p>These soils are deep, have moderate fertility, high waterholding capacity and have poor drainage. Slight limitation to root growth due to the dispersive subsoil clays in the sand over clay soils.</p>
MHB MHC MHE MHP	1.22 57.01 0.06 0.33	<p>Series of parallel ridges with a NNW-SSE orientation, up to 60 m high with slopes of 3-10%. The ridges are formed on calcreted calcarenite. They are partially overlain by sand spreads which tend to be more extensive on the eastern slopes. There is variable surface stone on the non-sandy slopes.</p> <p>MHB Gently sloping undulating sandy rises with 30-50% dune range and 10-20% stony rises MHC Undulating sandy rises to low hills with 10-20% stony rises and 0-10% swales MHE Depression MHP Undulating sandy rises to low hills with 10-20% stony rises and 0-10% depressions</p> <p>Main soils:</p> <p>Sandy rises: <u>Bleached siliceous sand</u> - H3 (V), <u>sand grading to sandy clay loam</u> - G2 (C), <u>highly leached sand</u> - I1, <u>loam over red clay</u> - D2, and <u>shallow loam over red-brown clay on calcrete</u> - B6 and <u>shallow sand over clay on calcrete</u> - B7.</p> <p>These soils are deep, have low fertility, moderate water holding capacity and rapid drainage. Severe water repellence, soil acidity and susceptibility to wind erosion are limitations.</p> <p>Shallow stony rises: <u>Shallow sandy loam on calcrete</u> - B3 (M), <u>shallow sand over clay on calcrete</u> - B7 (M), <u>shallow calcareous loam on calcrete</u> - B2 (M), <u>limestone outcrop</u> - RR and <u>shallow loam over red-brown clay on calcrete</u> - B6.</p> <p>These soils are very shallow and/or stony have moderately low water fertility, low holding capacity and are well drained.</p> <p>Swales and depressions: <u>Wet highly leached sand</u> - I2, <u>thick sand over clay</u> - G3 (M), <u>sand over poorly structured clay</u> - G4, <u>sandy loam over poorly structured brown or dark clay</u> - F2 and <u>wet soil</u> - N3.</p> <p>These soils are deep, have moderately low to low fertility, high waterholding capacity and imperfect to poor drainage. There is slight limitation to root growth due to dispersive subsoil clays.</p>
MNC	0.18	<p>Undulating sandy rises to low hills with 10-20% loamy rises and 0-10% stony rises that are formed on calcreted calcarenite. They are partially overlain by sand spreads which tend to be more extensive on the eastern slopes. There is variable surface stone on the non-sandy slopes.</p> <p>Main soils:</p> <p>Sandy rises: <u>bleached siliceous sand</u> - H3 (E), <u>sand grading to sandy clay loam</u> - G2 (L), <u>thick sand over clay</u> - G3 (M).</p> <p>These soils are deep with low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence, soil acidity and the susceptibility to wind erosion are limitations.</p> <p>Shallow and loamy soils: These are described in M-B landscape unit.</p> <p>These soils are moderate to shallow, have moderate to moderately low fertility and water holding capacity and rapid drainage. Rockiness may be a limitation.</p>
MRB MRC	1.55 3.61	<p>Undulating loamy rises to low hills with sandy rises and stony rises that are formed on calcreted calcarenite. They are partially overlain by sand spreads which tend to be more extensive on the</p>



		<p>eastern slopes. There is variable surface stone on the non sandy slopes</p> <p>MRB Undulating loamy rises (30-50%) with 30-50% sandy rises and 10-20% stony rises</p> <p>MRC Undulating rises to low hills (30-50%) with 30-50% sandy rises and 10-20% stony rises</p> <p>Main soils:</p> <p><i>Loamy surfaced:</i> <u>Loam over brown or dark clay</u> - F1, <u>shallow loam over red clay on calcrete</u> - B6 and <u>shallow red loam on limestone</u> - B4.</p> <p>These soils are shallow, have high fertility, moderate waterholding capacity and are rapidly drained. These soils have high productive potential for viticulture.</p> <p>Sand spreads: The sandy soils are <u>bleached siliceous sand</u> - H3 (E), <u>sand grading to sandy clay loam</u> - G2 (C), <u>thick sand over clay</u> - G3 (L) and <u>highly leached sand</u> - I1.</p> <p>These soils are deep with low fertility, moderate water holding capacity and rapid drainage. Severe water repellence, soil acidity and the susceptibility to wind erosion are limitations.</p> <p>Shallow soils: <u>Limestone outcrop</u> - RR, <u>shallow calcareous loam on calcrete</u> - B2 and B6.</p> <p>These soils are very shallow, have moderate fertility, low waterholding capacity and are well drained. These soils can be calcareous throughout and alkaline at depth. Surface rockiness may be a slight limitation.</p>
MSB MSC	0.74 6.02	<p>Undulating sandy rises to low hills with minor shallow areas formed on calcreted calcarenite.</p> <p>Main soils:</p> <p><u>Bleached siliceous sand</u> - H3 (E), <u>sand grading to sandy clay loam</u> - G2 (C), <u>highly leached sand</u> - I1, <u>shallow loam over red clay on calcrete</u> - B6 and <u>shallow sand on calcrete</u> - B8.</p> <p>These soils are deep, have low to very low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence, soil acidity and the susceptibility to wind and water erosion are limitations.</p>
MWE MWK	0.07 0.08	<p>Enclosed low lying sandy flats within the range system that is formed on calcreted calcarenites of ancient coastal dunes.</p> <p>MWE Flats and depressions</p> <p>MWK Closed depression</p> <p>Main soils: <u>Thick sand over clay</u> - G3, <u>sand over poorly structured clay</u> - G4, <u>bleached siliceous sand</u> - H3, <u>sand grading to sandy clay loam</u> - G2, <u>wet highly leached sand</u> - I2, <u>wet soil</u> - N3 and <u>shallow sand over clay on calcrete</u> - B7.</p> <p>These soils are moderately deep to deep, moderately low to low fertility and moderate to high waterholding capacity. The undulating plains have slightly imperfect drainage and the closed depressions are poorly drained. There is a slight to moderate limitation to root growth due to the dispersive subsoil clays. Where left exposed the soils may be prone to wind erosion.</p>
MYB MYC	2.84 1.11	<p>Gently sloping undulating loamy and sandy rises with 10-20% stony rises formed on calcreted calcarenites of ancient coastal dunes.</p> <p>Main soils:</p> <p>Loamy rises: <u>Shallow red loam on limestone</u> - B4, <u>loam over brown or dark clay</u> - F1 and <u>shallow sand over clay on calcrete</u> - B7. These soils are moderate in depth, have high fertility, moderate water holding capacity and are rapidly drained.</p> <p>Sandy rises: <u>Bleached siliceous sand</u> - H3, <u>bleached sand over sandy clay loam</u> - G2 and <u>thick sand over clay</u> - G3.</p> <p>These soils are deep, have low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence, soil acidity and the susceptibility to wind and water erosion are limitations.</p> <p>Shallow stony rises: <u>shallow calcareous loam on calcrete</u> - B2, <u>shallow loam over red clay on calcrete</u> - B6 and B4.</p> <p>These soils are shallow; have moderately low to moderate fertility and low waterholding capacity. The soils are calcareous throughout and rockiness may be a limitation.</p>
McB McE	5.95 0.82	<p>Undulating sandy slopes with closed depressions within the range system.</p> <p>McB Gently sloping undulating rises with minor depressions</p> <p>McE Closed depression</p> <p>Main soils: <u>Thick sand over clay</u> - G3, <u>sand over poorly structured clay</u> - G4, <u>bleached siliceous sand</u> - H3, <u>sand grading to sandy clay loam</u> - G2, <u>wet highly leached sand</u> - I2, and <u>shallow sand over clay on calcrete</u> - B7.</p>



		These soils have low fertility and moderate waterholding capacity. The plains are well drained and the depressions are imperfectly drained. Water repellence, soil acidity and the susceptibility to wind erosion are limitations on the undulating plains. There is a slight limitation to root growth due to the dispersive subsoil clays
NBA	1.11	Closed depression within the undulating rises to rolling hills formed on calcreted calcarenite, which are up to 2km in width and 6km in length. There is up to 40 m relief. Main soils: <u>Black cracking clay</u> - E1 , <u>shallow calcareous loam on calcrete</u> - B2 and <u>shallow dark clay loam on limestone</u> - B5 . These soils are shallow, have high fertility and moderately low to low waterholding capacity. Drainage is imperfect.
NTA NTG	0.53 0.51	Closed drainage depression within the undulating rises to rolling hills formed on calcreted calcarenite. There is up to 40 m relief. NTA Flat NTG Depression Main soils: <u>bleached siliceous sand</u> - H3 , <u>sand grading to sandy clay loam</u> - G2 and <u>thick sand over clay</u> - G3 . These soils are deep, have moderately low fertility and moderate waterholding capacity. Drainage is imperfect. The flats are dominated by soils with sandy surfaces, which may be susceptible to wind erosion.
OFD	0.57	Low sandy dune range with greater than 90% sand dune coverage formed on calcreted calcarenite. Main soils: <u>highly leached sand</u> - I1 , <u>wet highly leached sand</u> - I2 and <u>sand over acidic clay</u> - G5 . The soils are deep with low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence, soil acidity and the susceptibility to wind and water erosion (especially the high dunes) are limitations.
OQI OQd	0.58 1.73	Sandy dune ranges with up to greater than 90% sand dune coverage formed on calcreted calcarenite with 10-20% stony rises and up to 30% flats. OQI Dunes with 50% sand dune coverage and 50% sandy rises OQd High dunes with 50% sand dune coverage and 50% sandy rises Main soils: <u>bleached siliceous sand</u> - H3 and <u>bleached sand over sandy clay loam</u> - G2 . The soils are deep with low to very low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence and the susceptibility to wind and water erosion (especially the high dunes) is a limitation.
PBa	4.11	Sand plain to the southern part of the Land System with 20-30% sand rises and 0-10% stony rises. Main soils: Plains: <u>Thick sand over clay</u> - G3 , <u>bleached siliceous sand</u> - H3 , <u>wet highly leached sand</u> - I2 . and <u>bleached sand over sandy clay loam</u> - G2 . These soils are deep, have low fertility and moderate water holding capacity. The soils are well drained. Water repellence, soil acidity and wind erosion are limitations. Sandy rises: <u>bleached siliceous sand</u> - H3 and <u>bleached sand over sandy clay loam</u> - G2 . These soils are deep, have very low fertility and moderate waterholding capacity. Drainage is rapid. Severe water repellence, soil acidity and the susceptibility to wind and water erosion are limitations. Stony rises: <u>Shallow sandy loam on calcrete</u> - B3 and <u>limestone outcrop</u> - RR and <u>shallow loam over red clay on calcrete</u> - B6 . These soils are very shallow, have moderate fertility and moderately low waterholding capacity. Surface rockiness may be a slight limitation as well as the potential for wind erosion as the soils are sandy to sandy loam.
XRe	0.16	Closed freshwater wetland to the northern end of the NBA Landscape Unit closed plain within the range system. The swampy area covers 80-90% and the lunettes occupy 10-20%. Main soils: Swamps: <u>Wet soil</u> - N3 . These soils are deep, have moderately low fertility and high water holding capacity. Drainage is poor to very poor and seasonally inundated for greater than 3 months. This landscape unit is not suitable for agricultural production only opportunity grazing.



		Lunettes: Shallow loam over red clay on calcrete - B6 and thick sand over clay - G3. These soils are moderately deep, have high to moderate fertility, moderate waterholding capacity. Soils are well drained.
XaJ	0.04	Mosquito Creek. The soils within the creek system vary however main soils: <u>Wet soil - N3, thick sand over clay - G3; sandy loam over poorly structured brown or dark clay - F2.</u> These soils are deep with moderate fertility, have high waterholding capacity. Drainage is very poor and seasonally inundated for greater than 3 months. There is dispersive subsoil clay within 10-20 cm of the soil surface. The Mosquito Creek in some areas is permanently filled. This landscape unit is not suitable for agricultural production.
XI-	0.08	Freshwater lakes.
Xq- XqC	0.03 1.54	Freshwater swamps, at least seasonally inundated. Main soils: <u>wet soil - N3 and thick sand over clay - G3.</u> These soils are deep with moderately low to high fertility and high waterholding capacity. Drainage is very poor and are seasonally inundated for greater than 3 months. This landscape unit is not suitable for agricultural production, only for opportunity grazing.

Detailed soil profile descriptions:

(In alphabetic order)

- B2** Shallow calcareous loam on calcrete (Petrocalcic, Lithocalcic Calcarosol)
Thin stony loam to clay loam with overlying a brown clay loam overlying a calcreted calcarenite shallower than 50 cm. Limited on stony rises.
- B3** Shallow sandy loam on calcrete (Petrocalcic, Orthic Tenosol)
Loamy sand to loam with variable rubble and slight clay increase with depth overlying calcreted calcarenite shallower than 50 cm. Extensive on stony rises.
- B4** Red sandy loam over calcrete (Petrocalcic, Red Dermosol)
Medium thickness red sandy loam grading to friable red clay loam over calcreted calcarenite within 50 cm.
- B5** Shallow dark clay loam on limestone (Petrocalcic, Black Dermosol)
Black clay loam to light clay over calcreted limestone at shallow depth, grading to highly calcareous clay - flats.
- B6** Shallow sandy loam over red-brown clay on calcrete (Petrocalcic, Red Kandosol)
Medium thickness sandy loam with slight ironstone gravel overlying a weakly structured reddish brown sandy clay on calcarenite within 50 cm - rises.
- B7** Shallow sand over sandy clay on calcrete (Petrocalcic, Brown Chromosol)
Medium thickness sand overlying brown friable sandy clay to clay on limestone or calcreted sandy clay within 50 cm - flats.
- D2** Loam over red clay (Mottled, Hypercalcic Red Chromosol)
Medium to thick sandy loam to clay loam overlying a well structured red clay grading to red mottled clay with limestone segregations at depth.
- E1** Black cracking clay (Black Vertosol)
- F1** Loam over brown or dark clay (Melanic, Hypercalcic, Black/Brown Chromosol)
Medium thickness dark brown sandy loam over a thin to medium sand layer over a structured brown to black clay grading to a brown mottled clay with limestone segregations at depth.
- F2** Sandy loam over brown or dark poorly structured clay (Mottled, Mesonatric, Grey/Black Sodosol)
Medium thickness brown sandy loam over a thin to medium thickness pale sand layer over a columnar structured dispersive grey to black clay grading to brown mottled clay with depth.



- G2** Bleached sand over sandy clay loam (Mesotrophic, Haplic, Kandosol/Chromosol)
Medium to thick loose non-calcareous grey sand with a bleached A2 layer grading to yellowish sand, clear change, overlying an orange/brown sandy clay loam.
- G3** Thick sand over clay (Subnatric, Brown Sodosol/Chromosol)
Thick sand with a bleached A2 layer, clearly overlying a weak to moderate structured brown clay to sandy clay.
- G4** Sand over poorly structured clay (Subnatric, Brown Sodosol)
Medium sand with a bleached A2 layer clearly overlying a hard columnar structured dispersive brown mottled clay.
- G5** Sand over acidic clay (Sandy Brown Kurosol)
Sandy texture contrast soil with a friable brown strongly acidic clayey to clay loamy subsoil. Very acidic soil; incipient Bh horizons; moderate depth topsoils. Some with ironstone.
- H3** Bleached siliceous sand (Arenic, Bleached-Orthic Tenosol)
Thick to very thick bleached sand, organically darkened at the surface over yellow sand continuing below 150 cm. Common on rises.
- I1** Highly leached sand (Fragic, Pipey, Aeris Podosol)
Grey sand with a very thick bleached A2 layer, over dark brown and yellow massive soft to semi-hard clayey sand (coffee rock), grading to softer yellow and brown sand to sandy clay loam from about 80 cm.
- I2** Wet highly leached sand (Fragic, Humic, Aquic Podosol)
Grey sand with a thick bleached A2 horizon, overlying a thin to thick layer of coffee rock, grading to pale brown sand sharply overlying a grey, brown and yellow mottled sandy clay loam to light clay.
- M2** Deep friable gradational clay loam (Red-Brown-Grey- Black Dermosol)
Deep well structured red clay loamy soil.
- N3** Wet soil (non to moderately saline) (Calcareous Oxyaquic, Dermosolic Hydrosol)
Darkened loamy surface overlying pale brown sand over yellowish brown sandy clay on calcrete.
- WW** Water.

(Grouped on landscape position)

Sandy soils (dunes, rises and flats)

- H3** Bleached siliceous sand (Arenic, Bleached-Orthic Tenosol)
Thick to very thick bleached sand, organically darkened at the surface over yellow sand continuing below 150 cm. Common on rises.
- G2** Sand grading to sandy clay loam (Mesotrophic, Yellow Kandosol)
Thick bleached sand, organically darkened at surface, over a yellow and red friable massive sandy clay loam
- G3** Thick sand over clay (Eutrophic-Calcic, Brown Chromosol)
Thick to very thick bleached sand to loamy sand with an organically darkened surface abruptly overlying a friable yellowish brown and red sandy clay, with or without soft carbonate accumulations. Extensive on flats and low rises.
- G4** Sand over poorly structured clay (Sandy Hypercalcic, Brown Sodosol)
Thin to medium thickness sand sharply overlying a brown and yellow or grey mottled dispersive clay with strong columnar structure, calcareous with depth. Extensive on flats.



Stony soils

- B2** Shallow calcareous loam on calcrete (Petrocalcic, Lithocalcic Calcarosol)
Thin stony loam to clay loam with overlying a brown clay loam overlying a calcreted calcarenite shallower than 50 cm. Limited on stony rises.
- B3** Shallow sandy loam on calcrete (Petrocalcic, Orthic Tenosol)
Loamy sand to loam with variable rubble and slight clay increase with depth overlying calcreted calcarenite shallower than 50 cm. Extensive on stony rises.
- B4** Red loam over calcrete (Petrocalcic, Red Dermosol)
Medium thickness red loam grading to friable red clay loam over calcreted calcarenite within 50 cm.
- B6** Shallow loam over red-brown clay on calcrete (Petrocalcic, Red Kandosol)
Medium thickness loam with slight ironstone gravel overlying a weakly structured reddish brown sandy clay on calcarenite within 50 cm - rises.
- B7** Shallow sand over clay on calcrete (Petrocalcic, Yellow Chromosol)
Medium thickness sand overlying yellow friable clay on limestone or calcreted sandy clay within 50 cm. Limited in corridors between stony rises.
- L1** Shallow soil on rock (Gritty Red Kandosol)
Variable thickness gritty red loamy sand to sandy loam, becoming more clayey with depth over weathering rock.
- RR** Limestone outcrop (Petrocalcic, Leptic Rudosol)
Organically stained sandy to loamy sand surface over a sandy sub-soil with very little development on limestone or calcrete.

Heavy soils (flats, rises and swamps)

- F1** Loam over brown or dark clay (Melanic, Hypercalcic, Black/Brown Chromosol)
Medium thickness dark brown sandy loam over a thin to medium sand layer over a structured brown to black clay grading to a brown mottled clay with limestone segregations at depth.
- D2** Loam over red clay ((Mottled, Hypercalcic Red Chromosol)
Medium to thick sandy loam to clay loam overlying a well structured red clay grading to red mottled clay with limestone segregations at depth.
- N3** Wet soil (non to moderately saline) (Dermosolic, Oxyaquic Hydrosol)
Medium thickness clay overlying a dispersive grey clay with increasing pH at depth.

Further information: [DEWNR Soil and Land Program](#)

